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REMARKS

Applicants hereby add new claims 75-80 and cancel claims 61-62 and 70. Accordingly, claims 19-21, 49-52, 59-60, 63-69, and 71-80 are pending in the present application.

Claims 19-21, 49, 51, 59-62, 67-68 and 72-73 stand rejected under 35 USC 102(b) for anticipation by 5,446,531 to Boyer et al. Claims 50, 63, 65-66 and 70-71 stand rejected under 35 USC 103(a) for obviousness over Boyer. Claims 52, 69 and 74 stand rejected under 35 USC 103(a) for obviousness over Boyer in view of U.S. Patent No. 6,319,469 to Mian et al.

Applicants respectfully traverse the rejections and urge allowance of the present application.

Referring to claim 19, the apparatus now recites limitations of previously pending claim 20 and positively recites a plurality of sensors. The Office on page 3 of the Action relies upon the teachings of references 36, 40 of Boyer as allegedly disclosing a plurality of sensors. Referring to the teachings of Fig. 7 and col. 10, lines 31+ of Boyer, it is clear that *light sensitive components 36, 40* provide information for a single turbidity sensor. More specifically, the teachings of Boyer positively state that the signals from sensors 36, 40 are combined to provide a signal to microprocessor 106 which determines the turbidity of the fluid. Accordingly, information from both components 36, 40 is used to provide a single turbidity reading and the teachings of Boyer regarding components 36, 40 fail to disclose or suggest the limitations of claim 19 reciting the plural sensors individually configured to monitor turbidity of the subject material, wherein the sensors are configured to monitor the turbidity using particulate matter of the subject

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material, and the particulate material monitored by one of the sensors is different than the particulate material monitored by an other of the sensors as specifically claimed. It is clear that components 36, 40 provide turbidity information at one position in tank 70 by reflecting light from the same particulate material as is shown in Fig. 7 of Boyer. The teachings of Figs. 5 and 6 of Boyer merely illustrate a single sensor in each Figure capable of providing turbidity at a single location within the tank 70. Applicants have failed to uncover any teachings in Boyer of the limitations of claim 19 as recited above and claim 19 is allowable for at least this reason.

The claims which depend from independent claim 19 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, referring to claim 20, the Office relies upon the teachings of references 36, 40 of Boyer as allegedly disclosing the sensors defined in claim 20. However, references 36, 40 are clearly disclosed in Boyer as comprising components of *a single turbidity sensor* and Applicants have failed to uncover any teachings in the prior art of the claimed plural sensors let alone the specifically defined *sensors provided at different positions relative to the container to monitor the turbidity of the subject material at a plurality of vertical positions of the container*. Claim 20 is allowable for at least this additional reason.

Referring to claim 63, the Office states that Boyer fails to disclose the limitations with respect to a process chamber defined in claim 63. Applicants respectfully assert

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that the Office has failed to establish a prima facie 103 rejection and claim 63 is allowable.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, e.g., MPEP §2143 (8th ed., rev. 3).

MPEP 2142 (8th ed., rev. 3) states that the concept of prima facie obviousness allocates who has the burden of going forward with production of evidence in each step of the examination process and the *examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness*. The **examiner bears the initial burden** of factually supporting any *prima facie* conclusion of obviousness, that is, the initial burden is on the examiner **to provide some suggestion of the desirability of doing what the inventor has done**. MPEP §2142 (8th ed., rev. 3).

Applicants respectfully submit the motivational rationale is insufficient in view of precedent set forth by the Federal Circuit, and accordingly, the Office has failed to meet their burden of establishing a proper prima facie 103 rejection.

The Federal Circuit discussed proper motivation *In re Lee*, 61 USPQ 2d 1430 (Fed. Cir. 2002). The Court in *In re Lee* stated the factual inquiry whether to combine references must be *thorough and searching*. It must be based on objective evidence of record. The Court in *In re Fritch*, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992) stated motivation is provided only by showing some objective teaching in the prior art or that

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knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. The *Lee* Court stated that the Examiner's conclusory statements in the *Lee* case do not adequately address the issue of motivation to combine. The Court additionally stated that the factual question of motivation is material to patentability and *can not be resolved on subjective belief and unknown authority. The Court also stated that deficiencies of cited references cannot be remedied by general conclusions about what is basic knowledge or common sense but rather **specific factual findings** are needed. The Court further stated that the determination of patentability must be based on evidence. MPEP 2143.01 (8th ed., rev. 3) cites *In re Lee* and states the importance of relying upon **objective evidence** and **making specific factual findings** with respect to the motivation to combine references.*

The Office on page 4 states that the limitations of claim 63 are obvious because of Boyer's teaching of monitoring turbidity at any desired location because the sensor cluster is portable and attachable to any container or chamber and the combination would permit the turbidity of slurry to be measured.

In response and in view of the above authority, Applicants have failed to uncover any teachings in Boyer regarding semiconductor processing. To the contrary, Boyer explicitly discloses dishwasher and washing machine configurations in col. 1, lines 10+. The Office has failed to recite any objective evidence of record why one skilled or concerned with dishwasher or washing machine teachings would look to semiconductor prior art for meaningful teachings.

Further, Applicants respectfully submit the mere fact that references *can* be combined or modified does not render the resultant combination obvious *unless the*

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prior art also suggests the desirability of the combination. MPEP §2143.01III (8th ed., rev. 3) *citing In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Preferably the Examiner's explanation should be such that it provides that impetus necessary to cause one skilled in the art to combine the teachings of the references to make the proposed modification. *Ex Parte Levengood*, 28 USPQ2d, 1300, 1301, Footnote 2, (Bd. Pat. App. and Inter. 1993). The Examiner cannot establish obviousness by locating references which describe various aspects of a patent applicant's inventions without also providing evidence of the motivational force which would impel one skilled in the art to do what the patent applicant has done. *Ex Parte Levengood* 28 USPQ2d 1300, 1302. (Bd. Pat. App. & Inter. 1993). MPEP 2144 (8th ed., rev. 3).

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP §2143.01VI. (8th ed., rev. 3) *citing In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

In sum, there have been no deficiencies of the primary reference identified by the Office to motivate one to look to modify the primary reference. There is no evidence of record that the primary reference being modified suffers from any deficiencies or that any deficiencies would be solved by the combination proposed by the Office. There is no evidence of record that any improved operations of the primary reference would result from the modification proposed by the Office. The only motivational rationale provided by the Office is unsupported and conclusory and/or improperly based upon Applicants' own teachings and is irrelevant to the dishwasher or washing machine

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teachings of Boyer. The Office has failed to establish proper motivation for at least the above-mentioned compelling reasons and Applicants request withdrawal of the 103 rejection in the next Action.

Referring to claim 68, the apparatus stands rejected for alleged anticipation by Boyer. However, Applicants have failed to uncover teachings in Boyer of the sensors being individually configured to monitor turbidity including *monitoring all particulate matter suspended in the fluid at a respective vertical position of the container corresponding to the vertical position of the respective sensor* as claimed. For example, as clearly illustrated in Figs. 5 and 6 of Boyer, numerous portions of the fluid within the tank at the vertical position of the sensor lie outside of the areas being monitored by the sensor and the limitations of claim 68 are not disclosed nor suggested by the prior art.

Referring to claim 69, the Office relies upon the teachings of Mian in support of the 103 rejection. The Office states that the combination is appropriate so that the monitoring can determine the type of settling particles. Applicants respectfully disagree. There is no evidence of record that tank 70 is rotated during operations of Boyer or that Boyer is concerned with settling of particles. There is no evidence of record that one concerned with the teachings of Boyer would be desirous of determining the type of settling particles. The teachings of Mian are irrelevant to the teachings of Boyer and one would not be motivated to combine the disparate teachings as baldly set forth in the Office Action. Applicants respectfully submit there is no motivation and the Office has failed to establish a prime facie 103 rejection of the claims and claim 69 is allowable.

Referring to independent claim 49, the method recites limitations of previously pending claim 70. As acknowledged on page 4 of the Action, the settling of the

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particulate matter within the liquid of claim 49 is not disclosed by Boyer. Applicants respectfully submit the Office has failed to establish the limitations of previously pending claim 70 are obvious and Applicants request withdrawal of the 103 rejection of claim 49.

More specifically, Boyer is concerned with provision of a sensor platform which contains and protects a series of sensing components within a *dishwasher or washing machine for monitoring the condition of the liquid used by the machine* per col. 1, lines 10+ of Boyer. The Office has failed to present any rationale supported by objective evidence of record as to why one concerned with washing machine and dishwasher teachings and monitoring a condition of a liquid would be concerned with settling of particulate matter to modify Boyer as alleged by the Office. As set forth at col. 4, lines 7+ of Boyer, Boyer is directed towards alleviating the disadvantages of using a means for directing or transporting fluid to the operative zone of the sensor. Boyer is further directed towards provision of a plurality of instruments for temperature, conductivity or position in a cluster per col. 4, lines 13. Applicants have failed to uncover any evidence that Boyer is concerned with or could be improved upon by modifications to enable monitoring of settling of particulate matter within a fluid as positively claimed. Applicants respectfully submit the Office has failed to establish proper motivation to modify Boyer and the 103 rejection is improper for at least this reason.

Referring to claim 71, Applicants have failed to uncover any evidence that the single turbidity sensor arrangement of Boyer may be configured to *monitor precipitation rates of particulate matter within the fluid* as claimed. There is no motivation to modify Boyer concerned with monitoring the condition of a liquid within a dishwasher or a washing machine to arrive at the method of claim 71 reciting monitoring of the

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precipitation rates as explicitly claimed. Claim 71 is allowable for at least these compelling reasons.

Referring to the continued non-initialization of properly submitted prior art, Applicants submit courtesy copies of the prior art for the consideration by the Office and initialization on the enclosed form PTO-1449. No fees are due for the proper consideration and initialization of the art for at least the reasons set forth in the previous response, 37 C.F.R. § 1.98(d), MPEP § 609(2) and statements made in the originally filed information disclosure statement. Applicants respectfully request consideration of the prior art references and return of the initialed forms PTO-1449 to Applicants. The undersigned respectfully requests a telephone call to discuss any remaining issues with respect to the IDS so as to assure that all submitted prior art will be properly considered by the Office during the pendency of this application.

Applicants respectfully submit the new claims and claim amendments are supported at least by Fig. 2 and page 7, lines 14+ of the originally filed specification.

Applicants respectfully request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

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Respectfully submitted,

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